

FIG. 1

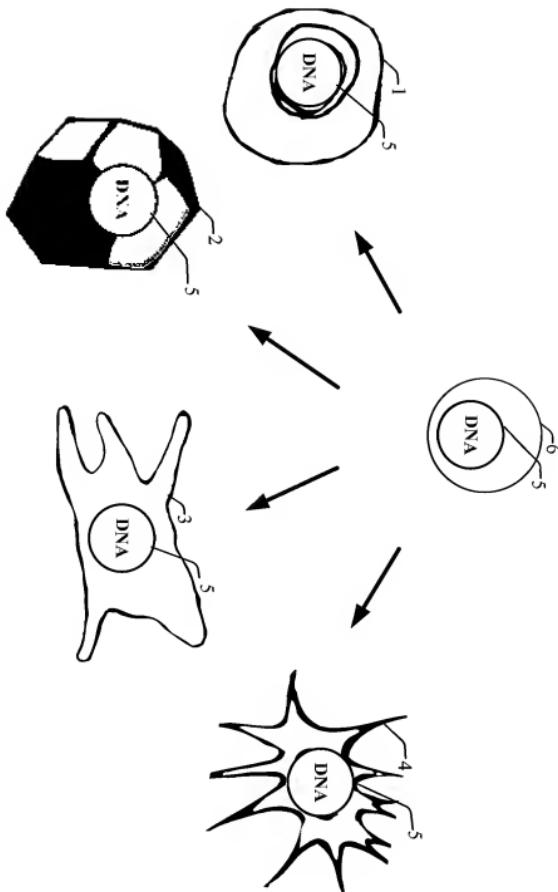


FIG. 2A

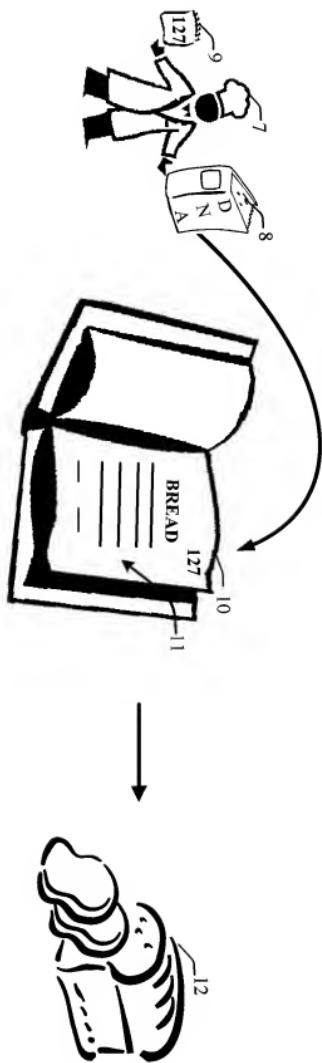


FIG. 2B

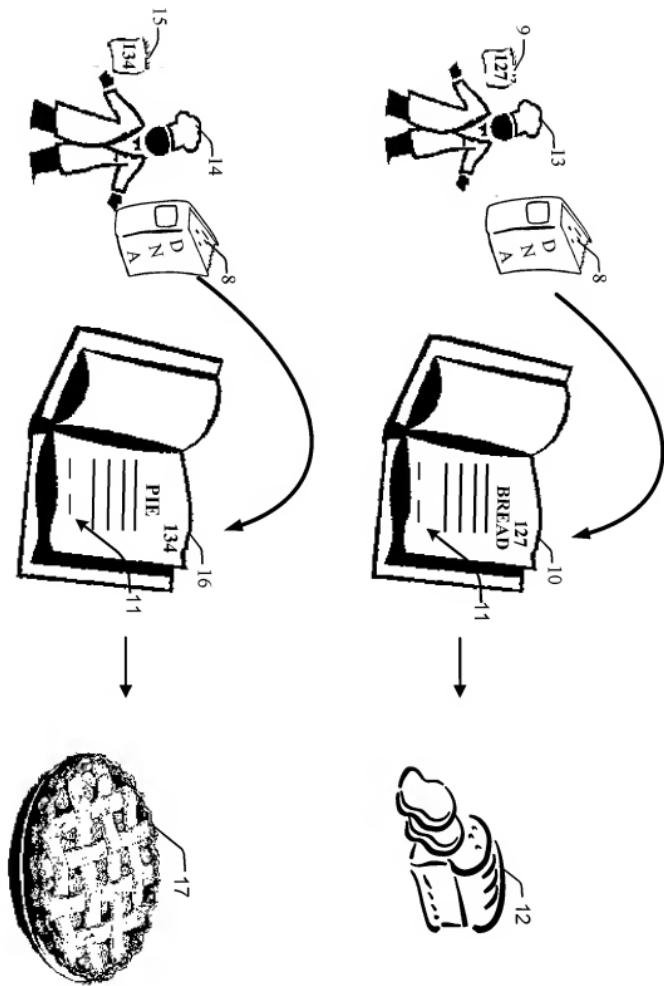


FIG. 3

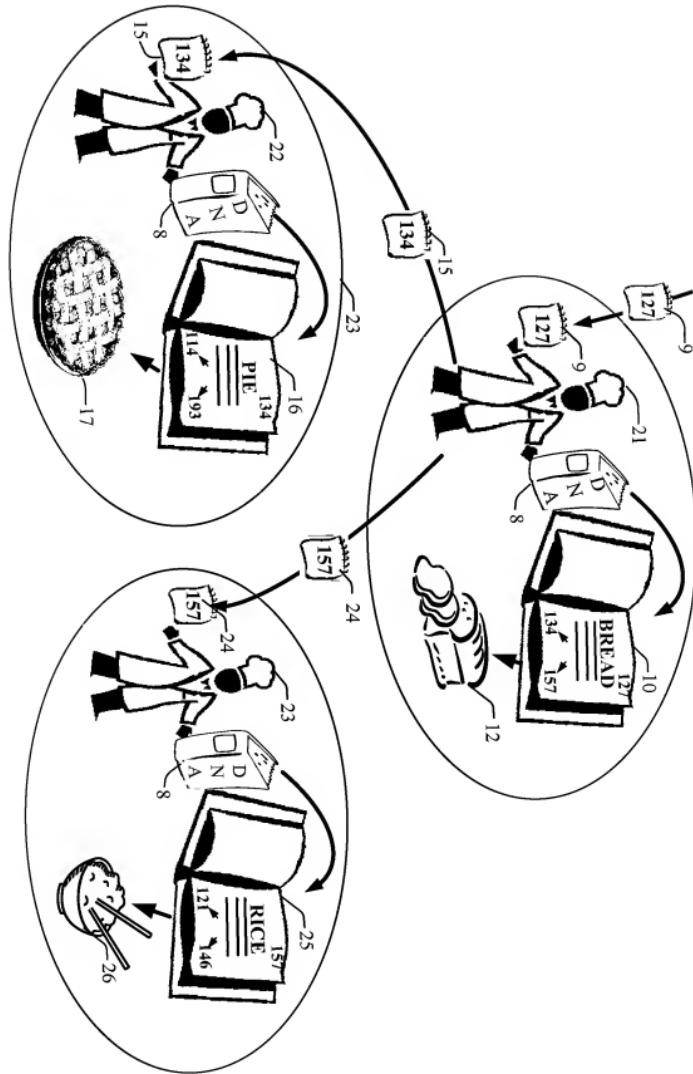


FIG. 4

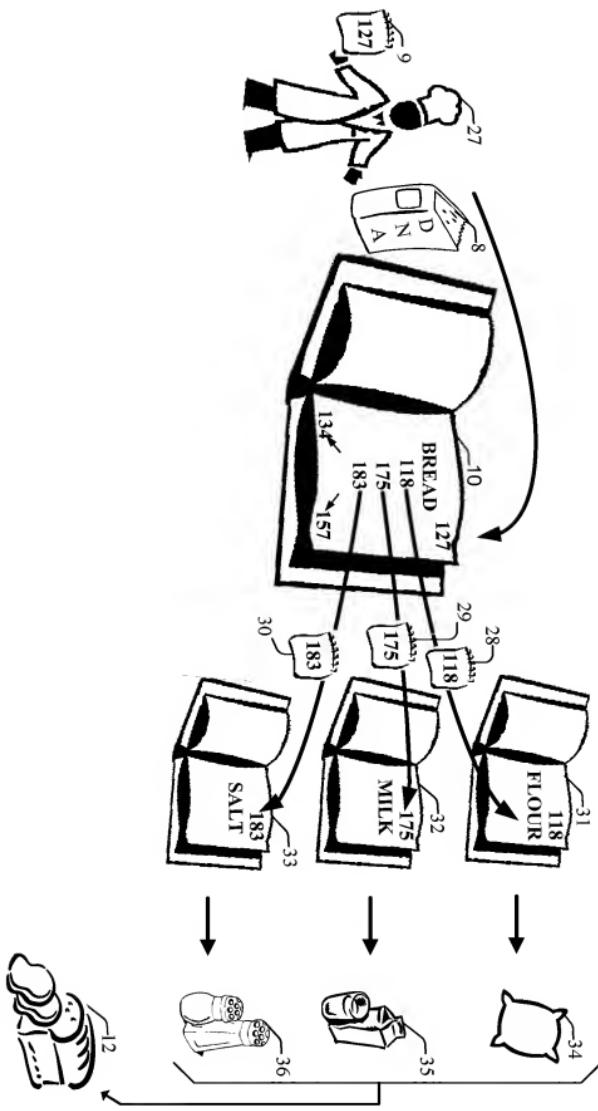


FIG. 5A

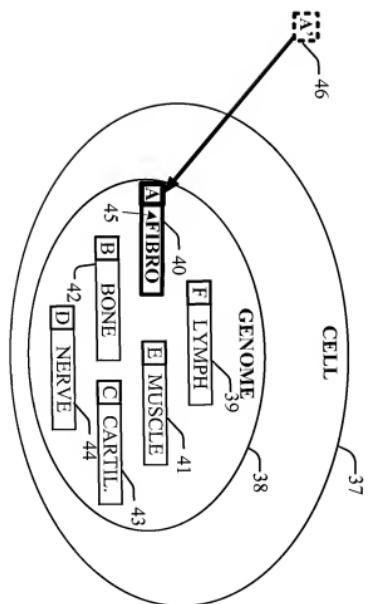


FIG. 5B

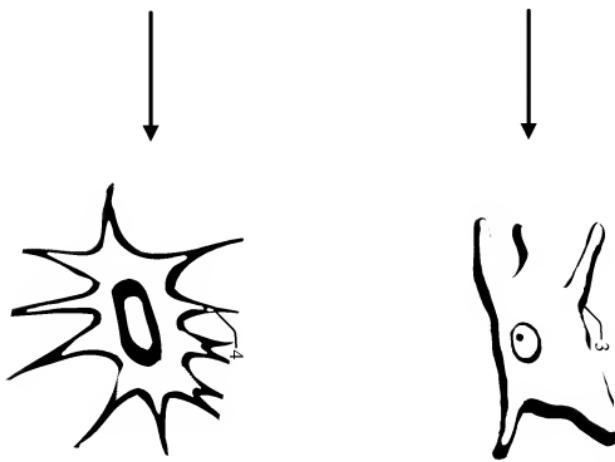
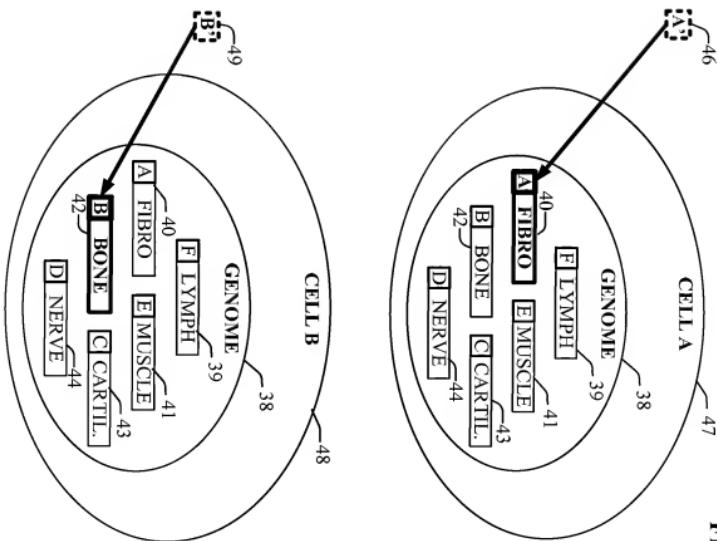


FIG. 6

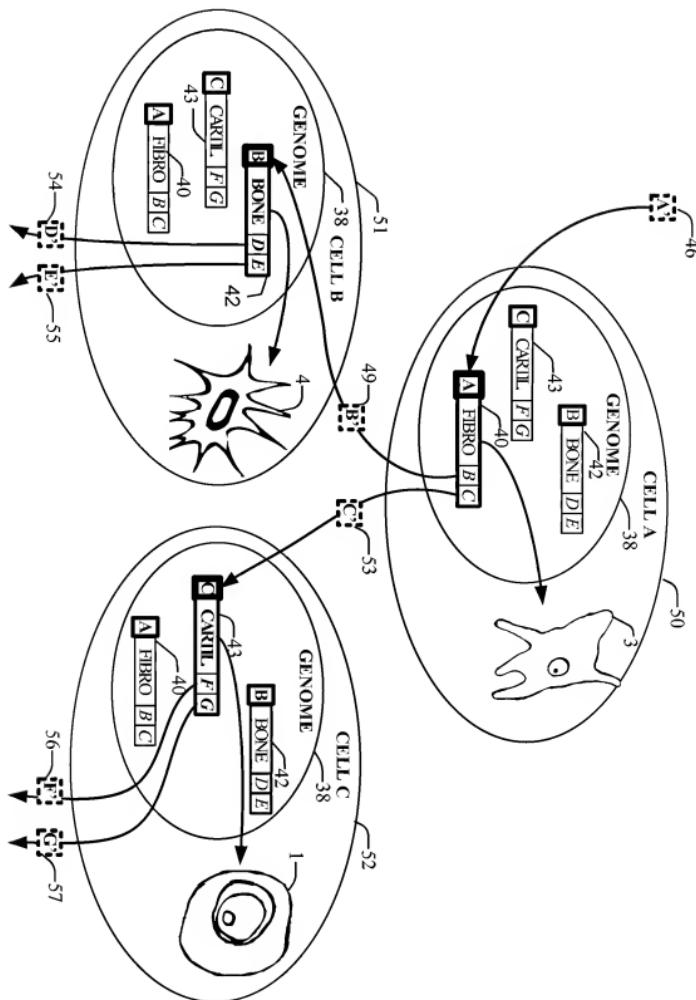


FIG. 7

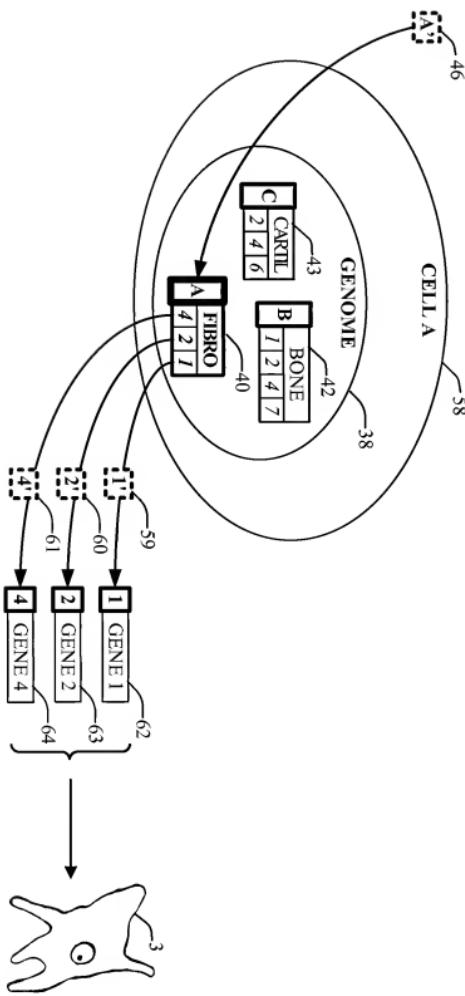


FIG. 8

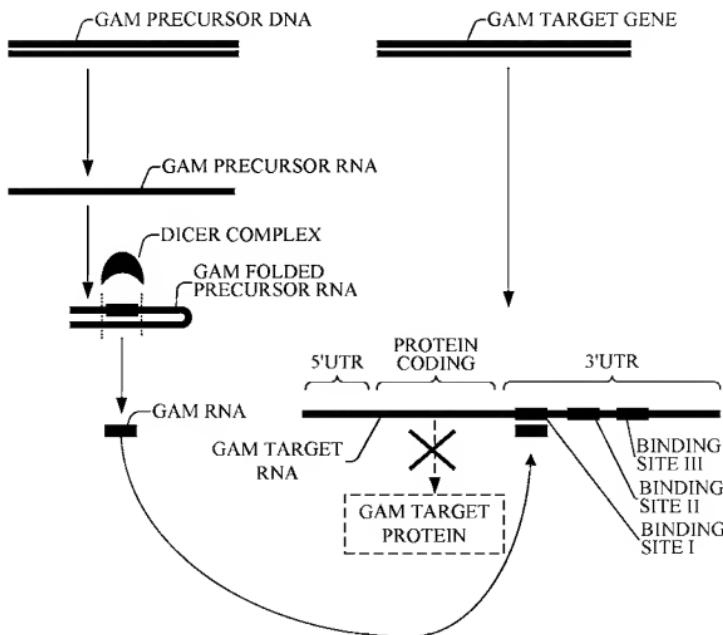


FIG. 9

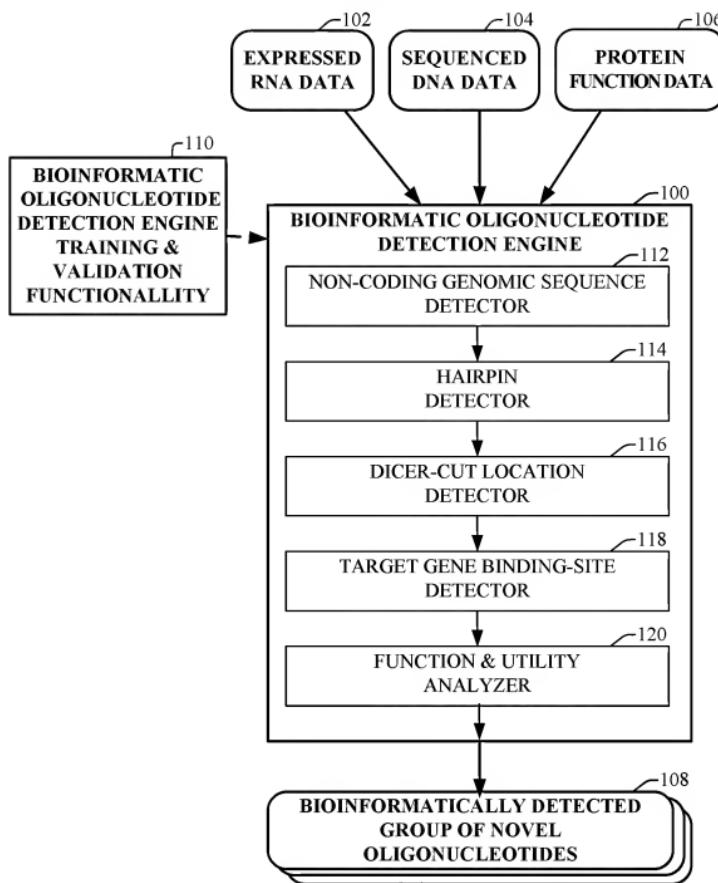


FIG. 10

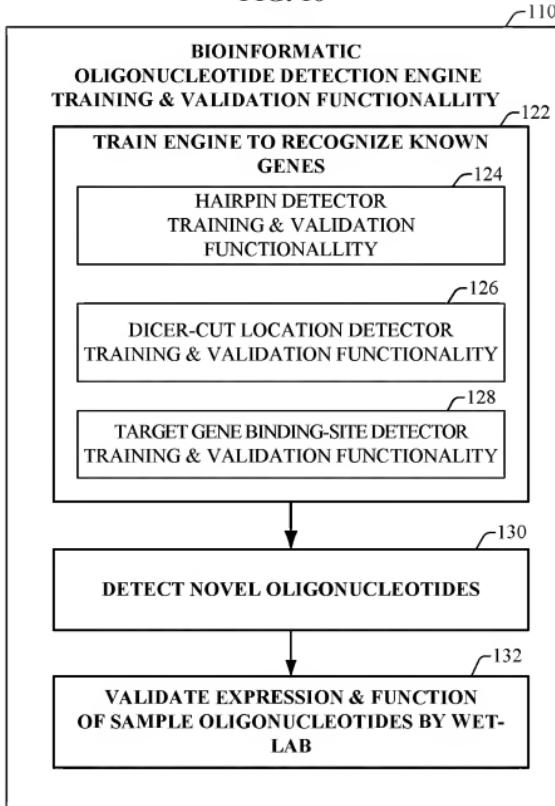


FIG. 11A

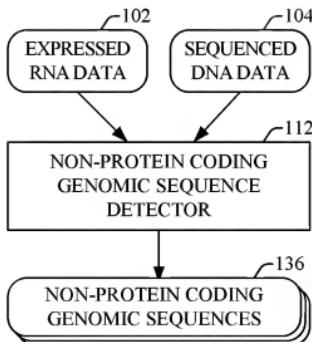


FIG. 11B

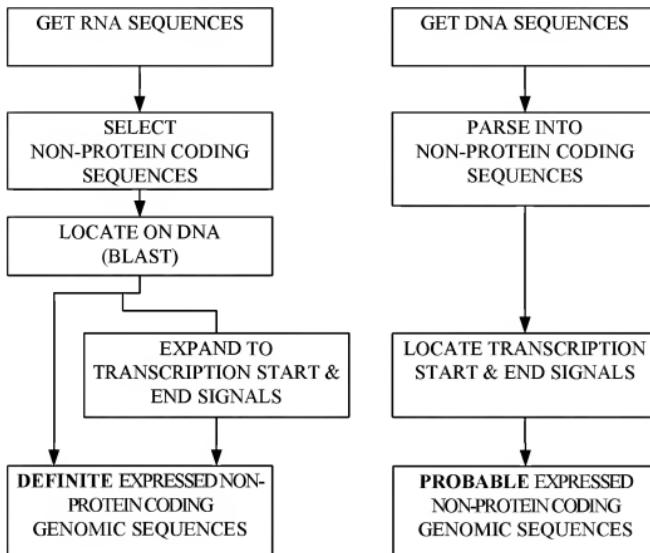


FIG. 12A

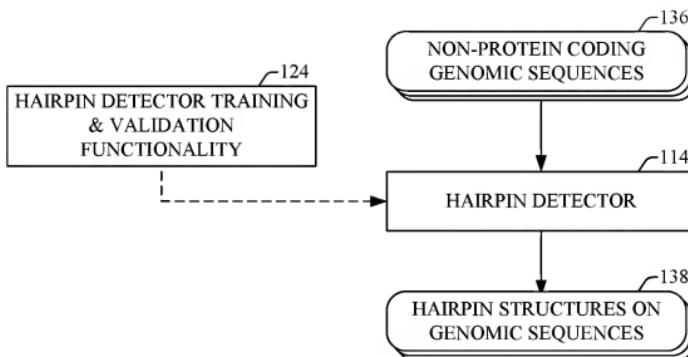


FIG. 12B

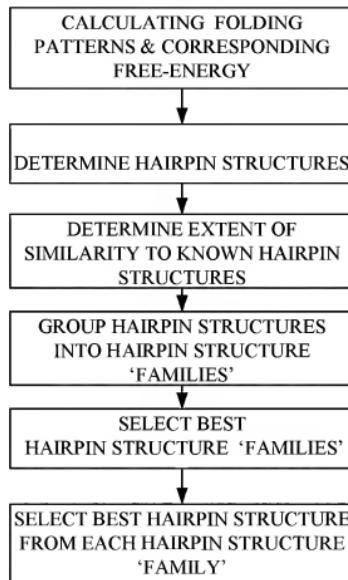


FIG. 13A

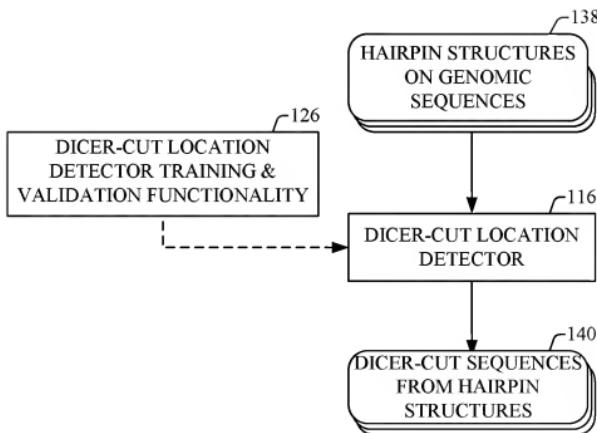


FIG. 13B

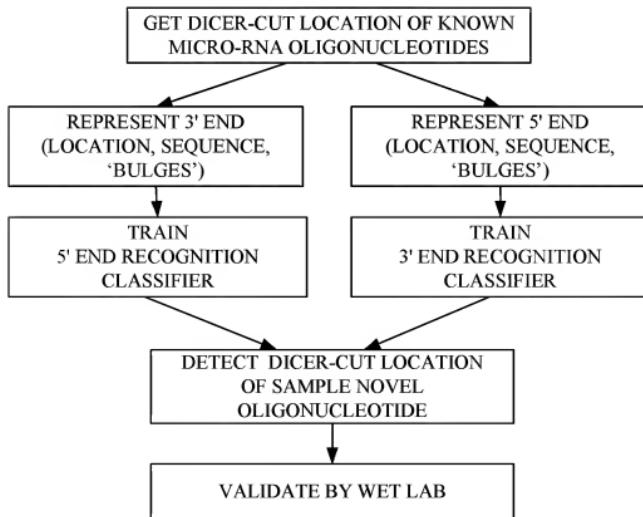


FIG. 13C

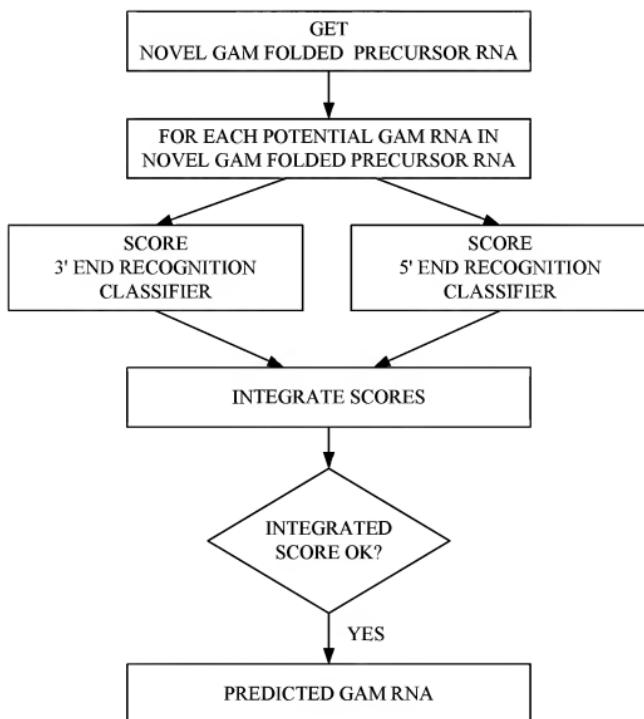


FIG. 14A

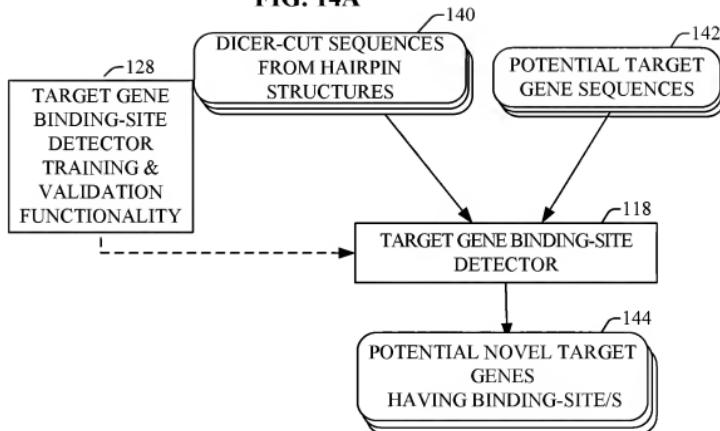


FIG. 14B

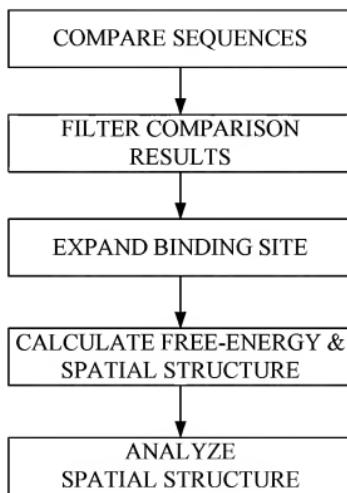


FIG. 15

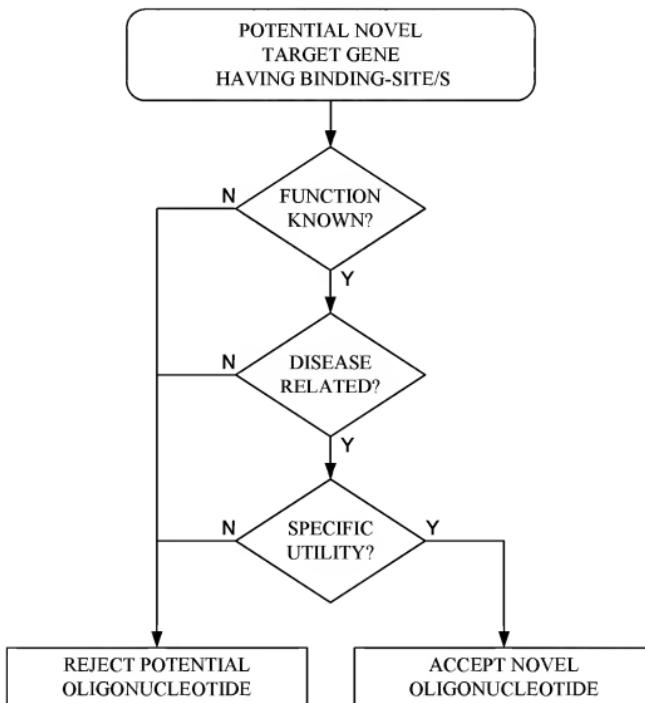


FIG. 16

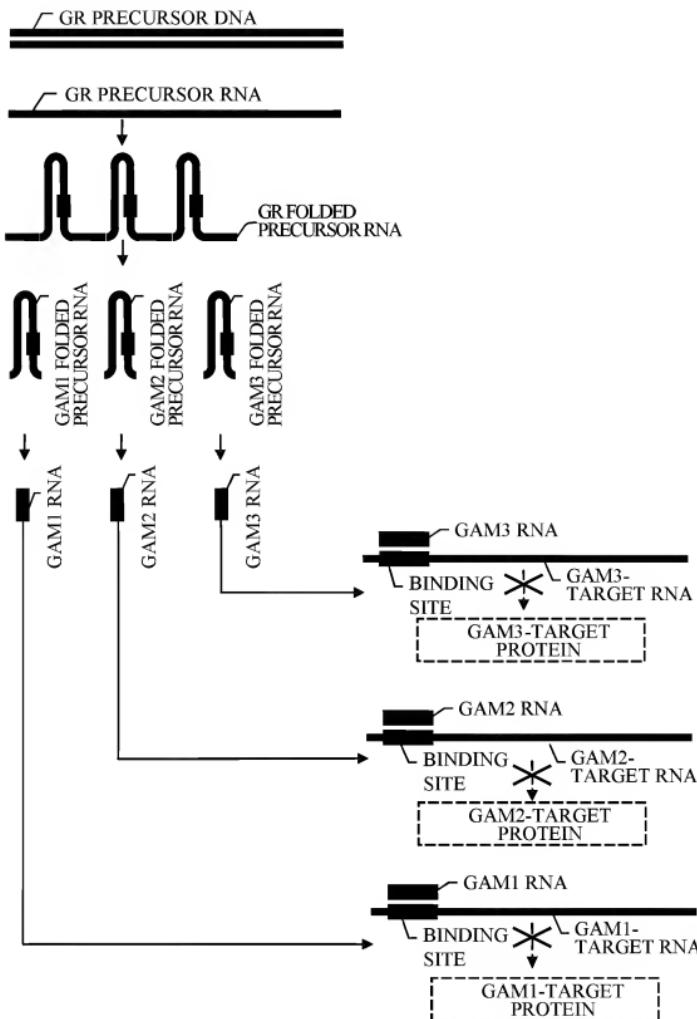


FIG. 17

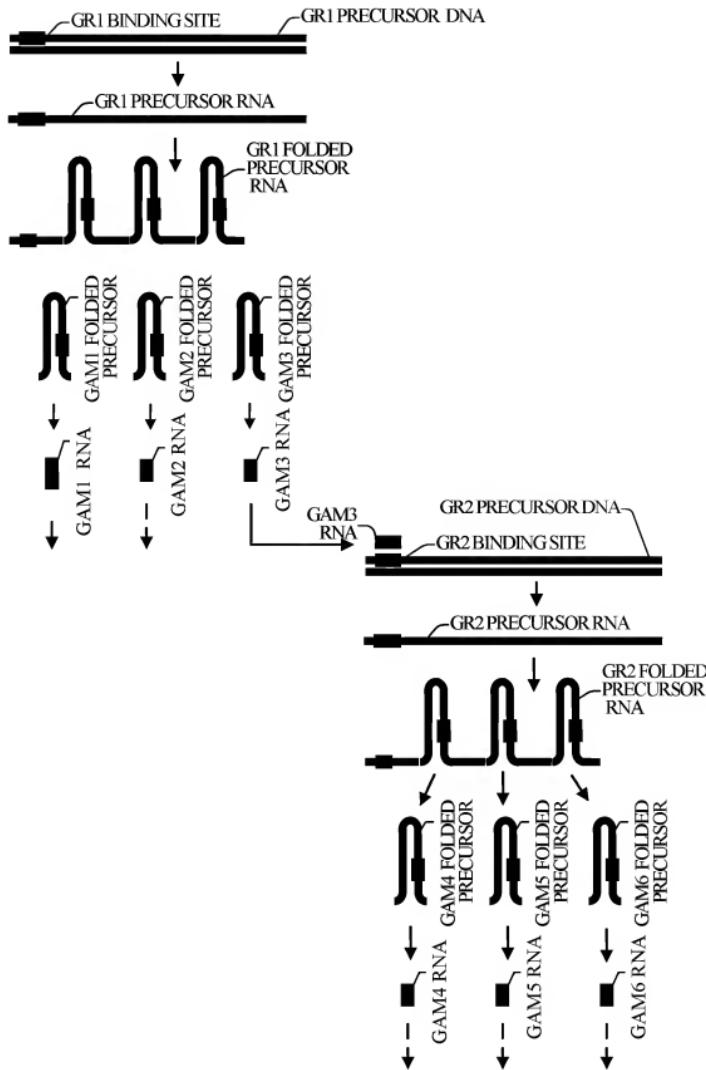


FIG. 18

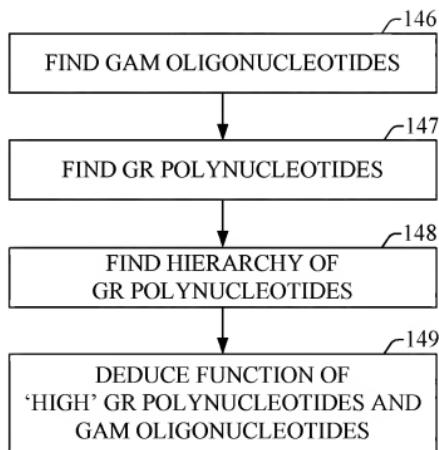


FIG. 19

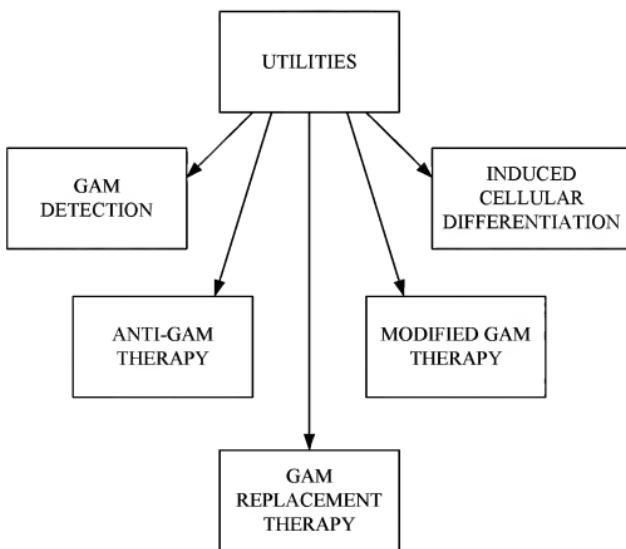


FIG. 20A

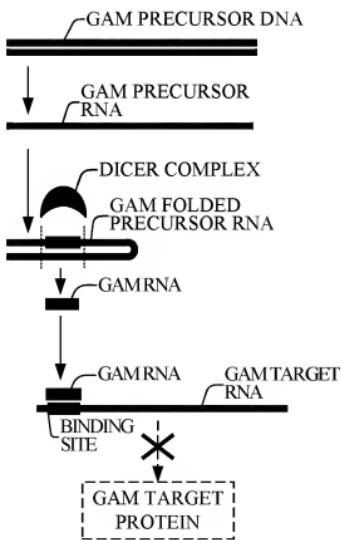


FIG. 20B

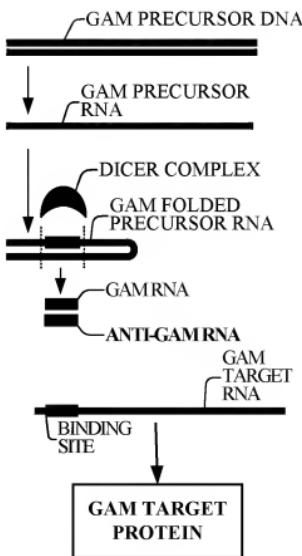


FIG.21A

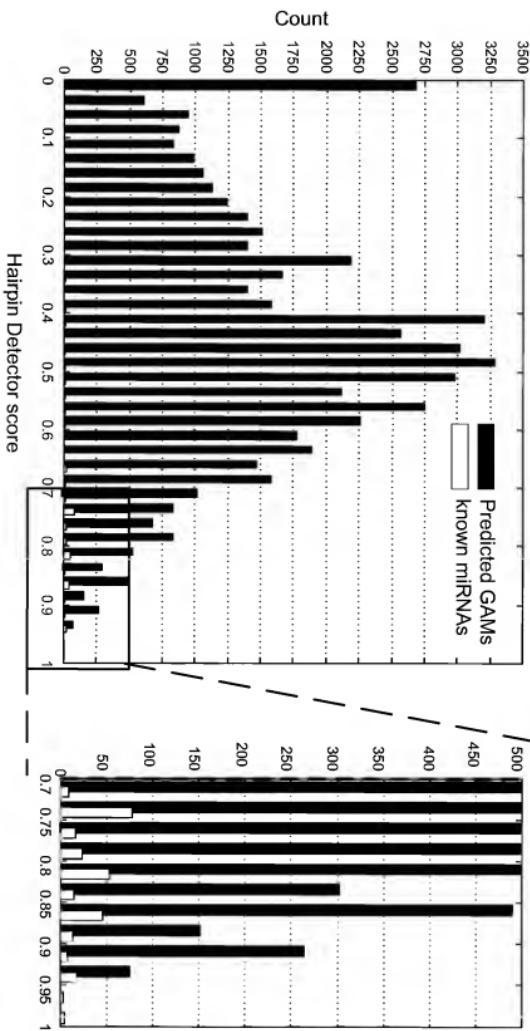


FIG. 21B

GAM Detection Accuracy Group	Number of published hairpins	Precision on hairpin mixture	Lab validation of Human GAMs	Hairpins in RNA databases	Hairpins of the present invention
		Sent	Positive	% success	
A	228	76%	101	37	37%
B	135	41%	56	13	23%
C	27	18%	7	1	14%
D	20	10%	4	1	25%
Overall	410	44%	168	52	31%
				42416	1891

FIG. 22A

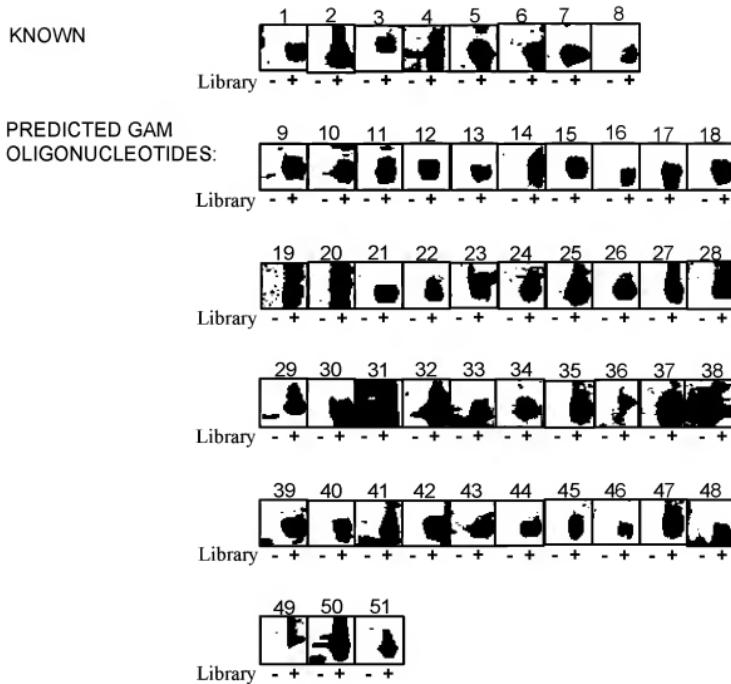


FIG. 22B

NUMBER	NAME	SEQUENCE (5 TO 3)	SEQUENCED
1	hsa-miR-21	TAGCTTATCAGACTGATGTTGA	+
2	hsa-miR-27b	TTCACAGTGGCTAAAGTCTGCA	+
3	hsa-miR-186	AAAAGAATTCTCCTTTGGGCCTT	+
4	hsa-miR-93	AAAGTCGTCTCGTGCAGGTAGT	+
5	hsa-miR-26a	TCAAGTAATCCAGGATAGGCTG	+
6	hsa-miR-191	AACGGAATCCCCAAAAGCAGCTG	+
7	hsa-miR-31	GGCAAGATGCTGGCATAGCTGT	+
8	hsa-miR-92	TATTGCACTTGTCCCAGGCTGT	+
9	GAM3418-A	ATCACATTGCCAGGGATTACCA	+
10	GAM4426-A	GAAGTTGAAGCCCTTGTGTTCA	+
11	GAM281-A	CACTGCACTCCAGCTGGCAA	
12	GAM7553-A	TAGGTAGTTCCCTGTGTTGGG	+
13	GAM5385-A	TCACAGTGAAACCGGTCTCTTC	+
14	GAM2608-A	TAAGGTGCATCTAGTCAGTTA	
15	GAM1032-A	CTAGACTGAAGCTCCTGAGGA	+
16	GAM3431-A	TAATACTGCCGGGTAATGATGG	
17	GAM7933-A	TAGCAGCACATAATGGTTGAA	
18	GAM3298-A	AAAGTGCCTAGTCAGTCAGGTAG	+
19	GAM7080-A	TTTCCACAGCGGCAATTCTTC	+
20	GAM895-A	AGCTGCCAGTTGAAGAACATT	
21	GAM3770-A	AAAGTTAAGAGCTCCAGGCCG	
22	GAM337162-A	ACTGCACTCCAGCCTGGGCAAC	+
23	GAM8678-A	GTGTTCCAGGAAGTCGTCCTGA	
24	GAM2033-A	TCAAGCTCATTCCTCAACCTC	
25	GAM7776-A	CATTGCACTCCAGCCTGGCAA	+
26	GAM8145-A	ACATGATCTCCTCACTCTAGGA	
27	GAM25-A	AATTGCTTGAACCCAGGAAGTG	+
28	GAM7352-A	TGTTTAAGTAGCTTATTATCT	
29	GAM337624-A	TCTAAGAGAAAGGAAGTTCAGA	+
30	GAM1479-A	GAAGGCAGTAGGGTGTATAGTT	+
31	GAM2270-A	ATCACATTGCCAGTATTACCC	+
32	GAM7591-A	TTGGAGTAATTCACTGTTAGGTT	+
33	GAM8285-A	AGTAGACAGTGGCAACATAGTC	
34	GAM6773-A	CTAGCCTGTTGTCCTACCCC	+
35	GAM336818-A	TGAGGTGGGATCCCAGGCC	+
36	GAM336487-A	TGGCTAGGTAAAGGGAAAG	+
37	GAM337620-A	AATCATCATTATTGAAAGTTA	+
38	GAM336809-A	TAAGGCATTTTATGGT	+
39	GAM5346-A	GCTGTTGTTAAGGGCACTTGGG	
40	GAM8554-A	TTCATGGGAGCAGGTGGTACAG	
41	GAM2701-A	ACTGCACTCCAGTCTGGGTGAC	
42	GAM7957-A	TCACTGCAACCTCTGCCCTCCC	
43	GAM391-A	CAGATCACATCCATCCGTCACC	
44	GAM6633-A	GCACTCAAGCCTGGGTTACAGA	
45	GAM19	AGAGAGTGGCAGGTCTGTTCT	
46	GAM8358-A	GATGAGGCCAGCACTGGG	
47	GAM3229-A	TGAGGTGGGAGAATTGCTTGA	
48	GAM7052-A	CATGTAATCCCACTACTCAGG	
49	GAM3027-A (mmu-MIR-29c)	TAGCACCATTTGAAATCGGTTA	+
50	GAM21 (mmu-MIR-130b)	CAGTGCAATGATGAAAGGGCAT	+
51	GAM oligonucleotide(mmu-MIR 30e)	TGTAAACATCCTGACTGGAAG	+

FIG. 23A



FIG.
23B



	AC-	TA	ACA	---	---	---	AG
N3	5' CTCC	CTGTTTC	GCATA	GCG	GTC	AGGG	CGCC T
	3' GGGG	GAGCAGCG	TGTGT	CCG	GCG	TTCC	GGGG G
		GAC	--	GAC	AGGG	C	TGGG CT

MIR23

		—	C	GTTCT	
5'	TGG	GTCCTGGCA	TG	TGTAT	T
3'	ACC	TAAGGGACCC	AC	ACTAA	A
	AT		T	—	ATTAGA

The diagram illustrates the genomic organization of the GAM116 gene. It shows the 5' end of the gene with the sequence 5'-CTCT-3' and the 3' end with the sequence AG-. The transcription start site is indicated by a vertical arrow pointing upwards from the sequence. The poly-A tail signal is shown as a bracketed sequence: -AGCTT-.

N4 GCGA G AGGCCG G A TT G
 5' TG CA TTTGGTTC TG CGCG CCGG CCT A
 3' GC GT GCTTGCT AC TGTCC CGGC C CG C
 ----- G GAC---- G G -- G

NO 5' GGTCAAATGTTATTGAAGTGTGAAAAAATTCTTCTTAACAA
3' AACTAAAACCAATGCATCACCTAAGTCGTGTGAAATCA

^ N₆
 5' GCGTCG A GCGGGG GGGG CG GC TCGGGG AGC C
 3' CTGAG T TGTCT TGT GT CC GGGTCTT TGC C
 G7 TA C AA GG C G G T

MIR24


N7 - AT T AAA AG --- - T
 5' TAGC AGCT TTGG ACAG GCCTG TACA GGC TG C G
 3' GTCA TCGG AGCC TCGG CGAGC GGTG CCG AG G G
 C C - - AG GA GCAC T T

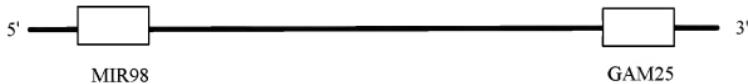


FIG. 23C

FIG. 24A

EST72223 (705 nt.)

Chr. X



EST72223 sequence:

CCCTTATTAGAGGATCTGCTATGCCAGGGTGAGGTAGTAAGTTGATG
TTGGGGTAGGGATATTAGGCCCAATTAGAAGATAACTACAACT
TACTACTTCCCTGGTGTGGCATATTCACTACTGGTCTAGCGTGGCC
TCCATCAGACAAGTTGAGATGTTCTGGATAATTGGACTGGAAAGAAAAGA
GACATGGAAAGGGGACAGATGGTGTAGGGTGGAGGCAAGATGCTTAAAGT
GACTTGTCTTCATTAAATTGGAGCATATAATTATTTACCTTGGGCATGAAC
ATTTGGCTATTCTTCAACTGTGTAATTGATGGTCAATTGTAATAGAACAGGA
ATGTGTCAGGAAAGTGGAAAGCATACTTAAAGAATTGGGCCAGGGCGGT
GGTTCATGCCTGTAATCCCAGCATTTGGGAGGCCAGGGGTGGATCAC
CTGAGGTCAAGGGTTCAGGACCAACCTGGCCAACACGGCGAACCCCCGGCTC
TACTAACATACAAAAATTAGCCAGGGTCTGGTACACTCGCCCTGTGGCCAGC
TACTCAGGGAGCTGAGGCAAGGAGAATGCTTGAACCCAGGAAGTGGAG
GCTTCAGTGGACTGAGGAGAACCCGCACTGCACTCCAGTCCTGGGCAAC
AGAGCAAGACTCTGCTCAGGAAAAAAAAG

FIG. 24B

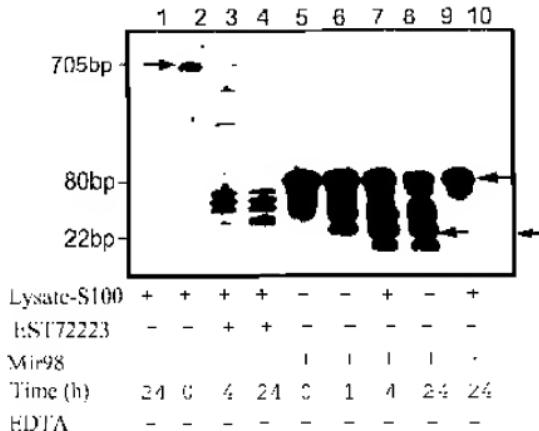


FIG. 24C

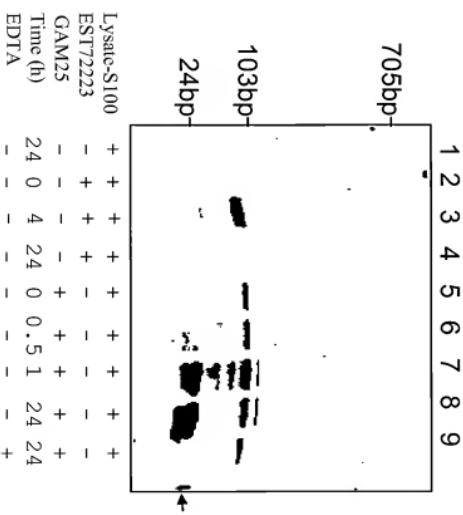
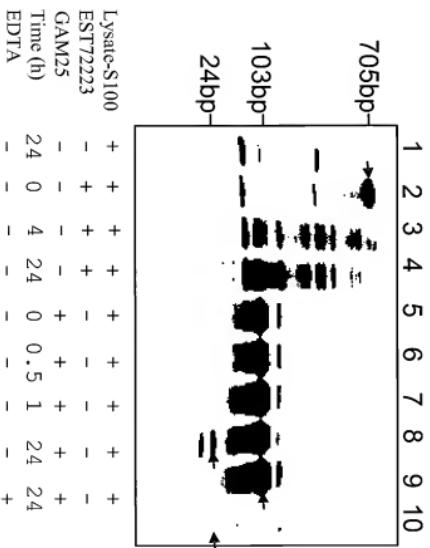


FIG. 24D